

GSW

**JW** John  
wood®

Residential and Commercial

# Product Catalogue



## Another hot water solution from John Wood®.

John Wood® water heaters by Noritz are brought to the Canadian market through the exclusive partnership between GSW and Noritz. They complement GSW's portfolio of high performance residential and commercial gas water heating solutions. John Wood® also offers a full-range of accessories that makes installation quick and easy. The unique snap-together design of our N-Vent system saves time and money. N-Vent telescopic elements completely eliminate the need to cut vent pipe.

### As a green building product it's environmentally friendly too!

John Wood® water heaters are extremely energy efficient, maximizing output while maintaining low emissions.

### Features

- Abundant hot water
- Energy efficient
- Space savings
- Safe & reliable
- Easy to install



**N-Vent – the most advanced venting system on the market.**

**Installation made simple and efficient.**



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GSW does not represent and/or warrant in any manner the information and suggestions contained in this brochure. GSW maintains a policy of ongoing product improvement. This may result in modification of features and/or specifications without notice.

# GSW Water Heating

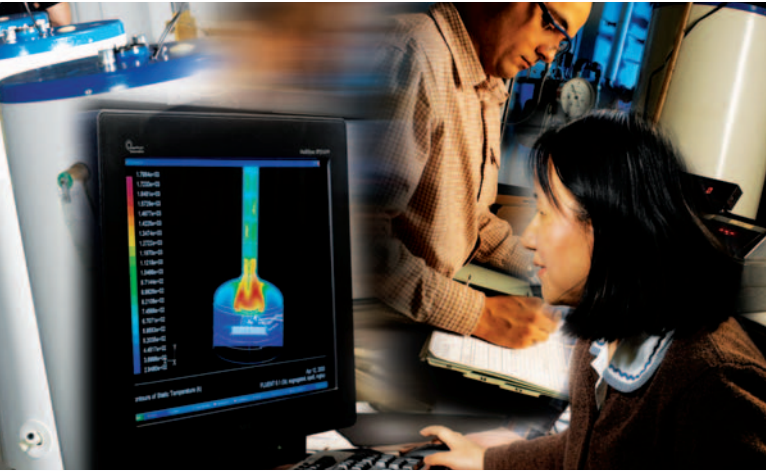


A leader in residential and commercial water heaters, GSW has evolved from a wood-burning stove company to a world-class designer and manufacturer of electric, natural gas, propane and oil fired water heaters. Backed by the company's manufacturing history of more than 150 years, GSW is recognized for design innovation and exceptional reliability.

Professionals recognize GSW brand names, such as John Wood®, for their unrivaled quality, efficiency and reliability. In fact, contractors have been trusting John Wood® for more than 50 years.

The new John Wood® Signature Series has been specifically designed for the needs of the professional installer. Our new gas models now deliver lower profiles for easy installation and maintenance, as well as smaller vent diameters and ultra-accurate dual electric thermostats for precision and control. What's more, our Signature Series electric models are custom built-to-order to ensure your exact specifications are met. All our heaters offer advanced features such as TankSaver® stainless steel inserts and glass-lined tanks for longer life.

# GSW Water Heating



GSW is one of the largest North American water heater manufacturers and a major supplier of residential and commercial water heaters worldwide. We have built an organization that strives for excellence at every stage. Our Research and Development Team constantly develops prototypes for continuous improvement, while our CSA-certified lab tests efficiency, performance and safety. Our inspectors maintain our stringent quality control standards, and our Technical Service department provides customers with product information and technical support. Moreover, GSW offers customized solutions for order management and logistics needs. From design to manufacturing, from service to support, GSW is committed to delivering products renowned for their technological innovation and unparalleled quality.

# Residential

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# GSW Safety Systems

Flammable Vapour Ignition Resistant (FVIR) technology you can trust.

GSW Water Heating has developed three unique Flammable Vapour Ignition Resistant (FVIR) Safety Systems that reduce the risk of accidental fires caused by the ignition of flammable vapours from products such as gasoline, paint thinner and solvents: the Flame Guard® and Flame Safe™ Safety Systems and the Superflue® Safety System.

## Flame Guard® Safety System



The Flame Guard® Safety System is a recognized and proven technology, exclusive to GSW and John Wood residential gas water heaters. The award-winning Flame Guard® Safety System protects the consumer by trapping burning vapours within the water heater combustion chamber through the patented “Flame-Trap.” As long as the vapours are present and within the flammability range, they will continue to burn safely until they “burn themselves out.”

## Flame Safe™ Safety System Used on John Wood® DV Water Heaters



Flame Safe™ technology - designed to protect the consumer against the ignition of flammable vapours.

## Superflue® Safety System Used on John Wood® PV Water Heaters

The Flammable Vapour Ignition Resistant (FVIR) Superflue® Safety System is a cutting-edge design unique to GSW power vented residential gas water heaters. The Superflue® Safety System features a flammable vapour sensor that protects the consumer by detecting the presence of flammable vapours in the atmosphere around the water heater and disabling the unit to minimize the risk of ignition. It also features a robust air intake snorkel that inhibits flammable vapours from entering the combustion chamber and igniting.

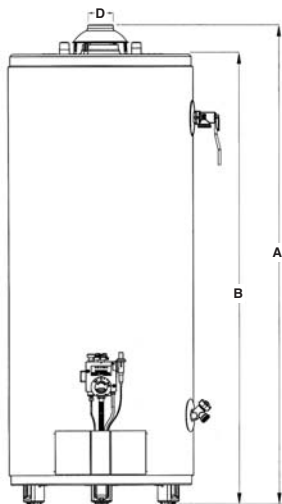
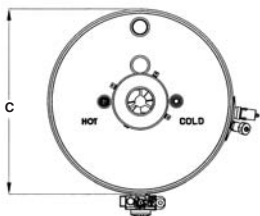
# Residential Gas



Proven Technology. Exceptional Reliability.  
Peace-of-mind.



- Glass-lined inner flue prevents scaling.
- Robust 1/4" pilot tubing for durability.
- Exceeds new NRCan energy requirements.
- Large viewport for easy access to pilot.
- CFC-free foam insulation.





# Residential Gas

Proven Technology. Exceptional Reliability.  
Peace-of-mind.

NATURAL GAS									
Model	Rated Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Energy Factor	Top of Vent A in. (cm)	Top of Jacket B in. (cm)	Jacket Dia. C in. (cm)	Vent Dia. D in. (cm)	Approximate Shipping Weight lb. (kg)
SS19NA-FV	19 (74)	22,000	18.7 (71)	0.58	40.5 (103)	37 (94)	19.5 (50)	3-4 (8-10)	81 (37)
JW30S30FV	30 (113)	30,000	27.3 (103)	0.61	50.3 (128)	46.8 (119)	18.6 (47)	3-4 (8-10)	108 (49)
JW30S27FV	30 (113)	27,000	24.5 (93)	0.61	50.3 (128)	46.8 (119)	18.6 (47)	3-4 (8-10)	108 (49)
JW40S38FV*	40 (151)	38,000	34.5 (131)	0.59	53.3 (135)	49.8 (126)	20.5 (52)	3-4 (8-10)	138 (63)
JW40S34FV*	40 (151)	34,000	31 (118)	0.59	53.3 (135)	49.8 (126)	20.5 (52)	3-4 (8-10)	138 (63)
JW40T40FV	40 (151)	40,000	37.3 (141)	0.60	63.3 (161)	59.8 (152)	18.6 (47)	3-4 (8-10)	135 (61)
JW40T36FV	40 (151)	36,000	33.6 (127)	0.60	63.3 (161)	59.8 (152)	18.6 (47)	3-4 (8-10)	135 (61)
JW50S40FV*	50 (189)	40,000	37.3 (141)	0.58	54.7 (139)	51.2 (130)	22.5 (57)	3-4 (8-10)	170 (77)
JW50S36FV*	50 (189)	36,000	33.6 (127)	0.58	54.7 (139)	51.2 (130)	22.5 (57)	3-4 (8-10)	170 (77)
JW50T40FV	50 (189)	40,000	37.3 (141)	0.58	62 (157)	58.5 (149)	20.6 (52)	3-4 (8-10)	168 (76)
JW50T36FV	50 (189)	36,000	33.6 (127)	0.58	62 (157)	58.5 (149)	20.6 (52)	3-4 (8-10)	168 (76)
JW6058NA-FV**	60 (227)	58,000	52.7 (200)	0.57	63 (160)	59.3 (150)	24.6 (63)	4 (10)	206 (93)
JW602NA-FV**	60 (227)	52,200	47.5 (180)	0.57	63 (160)	59.3 (150)	24.6 (63)	4 (10)	206 (93)
6G-75-3NC***	75 (284)	76,000	68.2 (258)	0.53	66 (168)	61.6 (157)	26 (66)	4 (10)	268 (122)

\* Pro Series Models.

\*\* High altitude models de-rated by 10% as per CSA.

\*\*\* Side taps.

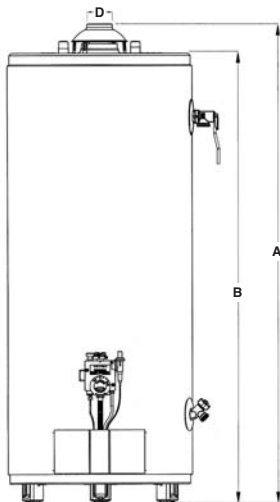
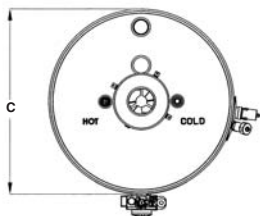
# Residential Propane



Proven Technology. Exceptional Reliability.  
Peace-of-mind.



- Glass-lined inner flue prevents scaling.
- Robust 1/4" pilot tubing for durability.
- Exceeds new NRCAN energy requirements.
- Large viewport for easy access to pilot.
- CFC-free foam insulation.





# Residential Propane

Proven Technology. Exceptional Reliability.  
Peace-of-mind.

PROPANE										
Model	Rated Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Energy Factor	Top of Vent A in. (cm)	Top of Jacket B in. (cm)	Jacket Diameter C in. (cm)	Vent Diameter D in. (cm)	Approximate Shipping Weight lb. (kg)	
GP630S30FV	30 (113)	30,000	27.3 (103)	0.61	50.3 (128)	46.8 (119)	18.6 (47)	3-4 (8-10)	108 (49)	
GP630S27FV	30 (113)	27,000	24.5 (93)	0.61	50.3 (128)	46.8 (119)	18.6 (47)	3-4 (8-10)	108 (49)	
GP640S38FV	40 (151)	38,000	34.5 (131)	0.59	53.3 (135)	49.8 (126)	20.5 (52)	3-4 (8-10)	138 (63)	
GP640S34FV	40 (151)	34,000	31 (118)	0.59	53.3 (135)	49.8 (126)	20.5 (52)	3-4 (8-10)	138 (63)	
GP640T40FV	40 (151)	40,000	37.3 (141)	0.60	63.3 (161)	59.8 (152)	18.6 (47)	3-4 (8-10)	135 (61)	
GP640T36FV	40 (151)	36,000	33.6 (127)	0.60	63.3 (161)	59.8 (152)	18.6 (47)	3-4 (8-10)	135 (61)	
GP650S40FV	50 (189)	40,000	37.3 (141)	0.58	54.7 (139)	51.2 (130)	22.5 (57)	3-4 (8-10)	170 (77)	
GP650S36FV	50 (189)	36,000	33.6 (127)	0.58	54.7 (139)	51.2 (130)	22.5 (57)	3-4 (8-10)	170 (77)	
GP650T40FV	50 (189)	40,000	37.3 (141)	0.58	62 (157)	58.5 (149)	20.6 (52)	4 (10)	168 (76)	
GP650T36FV	50 (189)	36,000	33.6 (127)	0.58	62 (157)	58.5 (149)	20.6 (52)	4 (10)	168 (76)	
6G-75-3PC*	75 (284)	76,000	61.4 (232)	0.53	66 (168)	61.6 (157)	26 (66)	4 (10)	268 (122)	

High altitude models are de-rated by 10% as per CSA.

\* Side taps.

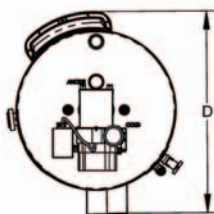
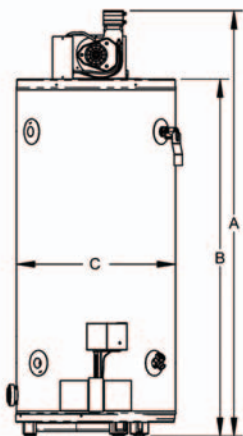
# John Wood® Power Vent



An advanced line of power vented water heaters for the professional.



- Flammable vapour sensor detects the presence of flammable vapours and automatically disables the unit preventing their ignition.
- Robust air intake snorkel inhibits flammable vapours from entering the sealed combustion chamber.
- State-of-the-art modular gas control features advanced self-diagnostic capability that makes troubleshooting quick and easy.
- All units can be vented horizontally through the wall or vertically through the roof with plastic venting pipe certified for gas fired appliances.
- Quietest power vent water heater on the market.





# John Wood® Power Vent

An advanced line of power vented water heaters for the professional.

<b>CAPACITY &amp; PERFORMANCE</b>									
Model	Capacity USG (Litres)	Input BTU	Recovery @100°F/55°C Rise USG (Litres)	Energy Factor	Height to Top of Blower A in. (cm)	Height to Top of Tank B in. (cm)	Diameter C in. (cm)	Overall Depth D in. (cm)	Shipping Weight lb. (kg)
<b>NATURAL GAS</b>									
JW40NVH-FV	40 (151)	33,000	30 (112)	0.60	58 (147)	48.5 (123)	21.13 (54)	26 (66)	155 (70)
JW50NVH-FV	50 (189)	38,000	34 (129)	0.60	60.5 (154)	51 (129.5)	22.63 (57)	27.25 (69)	187 (85)
JW5065SNV-FV*	50 (189)	65,000	59 (223)	0.60	60.75 (154)	51.25 (130)	22.63 (57)	27.25 (69)	200 (90)
JW5065LNV-FV*	50 (189)	65,000	56 (212)	0.60	60.75 (154)	51.25 (130)	22.63 (57)	27.25 (69)	200 (90)
<b>LIQUID PROPANE</b>									
6G40PVH-FV	40 (151)	33,000	30 (112)	0.60	58 (147)	48.5 (123)	21.13 (54)	26 (66)	155 (70)
6G50PVH-FV	50 (189)	38,000	34 (129)	0.60	60.5 (154)	51 (129.5)	22.63 (57)	27.25 (69)	187 (85)
6G65SPV-FV	50 (189)	65,000	59 (223)	0.60	60.75 (154)	51.25 (130)	22.63 (57)	27.25 (69)	200 (90)

High altitude, 0-4500', models are de-rated by 10% as per CSA.

\* Side taps

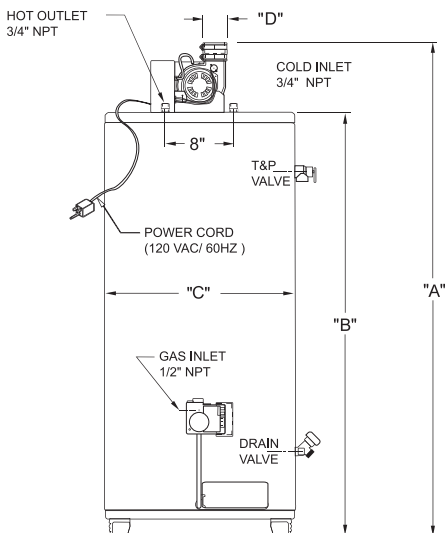
# John Wood® Power Vent



Large capacity power vent water heaters.



- Flexible vent connector coupling reduces vibration noise.
- Electronic gas control with self-diagnostics.
- Wide burner door for easy accessibility.
- Convenient 3/4" side toppings for combo applications on 75 USG models.
- CFC-free foam insulation.







# John Wood® Power Vent

Large capacity power vent water heaters.

<b>NATURAL GAS and PROPANE</b>										
Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Energy Factor	Side Taps	Height to Top of Blower A in. (cm)	Height to Top of Heater B in. (cm)	Diameter C in. (cm)	Vent D in. (cm)	Approx. Shipping Weight lb. (kg)
<b>NATURAL GAS</b>										
JW60NVH-FV-02	60 (227)	38,000	34 (129)	0.58	N/A	70.5 (173)	59.5 (151)	22.5 (57)	2-3 (5-7.6)	190 (86)
JW60NVH-FV-04	60 (227)	38,000	34 (129)	0.58	N/A	70.5 (173)	59.5 (151)	22.5 (57)	2-3 (5-7.6)	190 (86)
JW6-75-3NCV-02	75 (284)	76,000	67 (253)	0.56	0.75"	71.5 (182)	62 (157)	24 (61)	3 (7.6)	266 (120)
JW6-75-3NCV-04	75 (284)	76,000	61 (231)	0.56	0.75"	71.5 (182)	62 (157)	24 (61)	3 (7.6)	266 (120)
<b>PROPANE</b>										
6G60PVH-FV-06	60 (227)	38,000	34 (129)	0.58	N/A	70.5 (173)	59.5 (151)	22.5 (57)	2-3 (5-7.6)	194 (88)
6G-75-3PCV-04	75 (284)	76,000	61 (231)	0.56	0.75"	71.5 (182)	62 (157)	24 (61)	3 (7.6)	266 (120)

High altitude models are de-rated by 10% as per CSA.

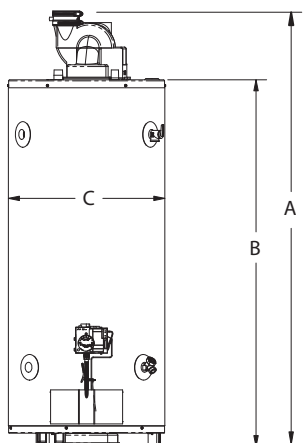
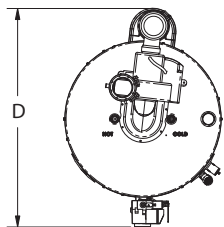
# John Wood® Power Direct Vent



An advanced line of high efficiency power direct vented water heaters.



- Sealed combustion chamber design enhances air quality as no indoor air is required for combustion.
- Industry leading, ultra quiet blower continues the GSW tradition of quiet power vent water heaters.
- Convenient 3/4" side taps for combination applications.
- Energy savings - exceeds energy efficiency standards.
- Vented with 3" plastic pipe certified for gas fired appliances, up to 60 equivalent feet, horizontally through the wall or vertically through the roof.





# John Wood® Power Direct Vent

An advanced line of high efficiency power direct vented water heaters.

## CAPACITY & DIMENSIONS

Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Energy Factor	Height in. (cm)	Height to Top of Blower A in. (cm)	Height to Top of Tank B in. (cm)	Diameter C in. (cm)	Overall Depth D in. (cm)	Vent in. (cm)	Approximate Shipping Weight lb. (kg)
<b>NATURAL GAS</b>											
JW5065SN-PDV-02	50 (189)	65,000	60 (227)	0.60	61 (155)	61.7 (157)	52 (132)	22.6 (57)	31 (79)	3 (7.6)	190 (86)
JW5065SN-PDV-04	50 (189)	58,500	54 (204)	0.60	61 (155)	61.7 (157)	52 (132)	22.6 (57)	31 (79)	3 (7.6)	190 (86)

High altitude models are de-rated by 10% as per CSA.

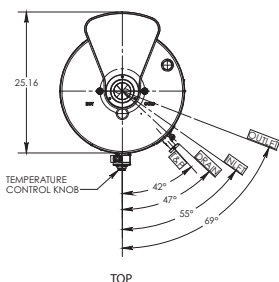
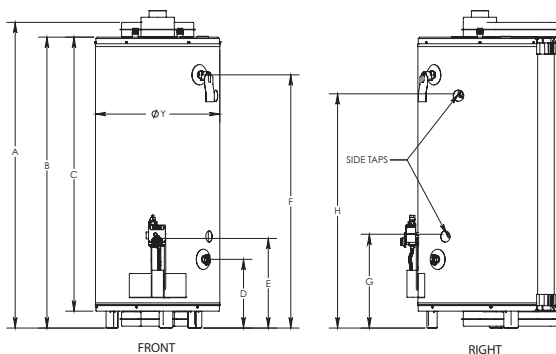
# John Wood® Direct Vent



A unique balanced flue design.



- No chimney needed.
- Easy to install flexible co-axial vent supplied with the water heater.
- Meets latest NRCan energy efficiency standards.
- No external power supply required.
- CFC-free foam insulation.





# John Wood® Direct Vent

A unique balanced flue design.

<b>NATURAL GAS</b>											
Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Energy Factor	Installation Height A in. (cm)	Height to Top of Heater B in. (cm)	Diameter C in. (cm)	Co-axial Vent D in. (cm)	Clearance to Combustibles* E in. (cm)	Max. Vent Length F in. (cm)	Approx. Shipping Weight lb. (kg)
<b>NATURAL GAS</b>											
JW40BFNA-FV	40 (151)	38,000	34 (129)	0.59	54.8 (139)	51.9 (131)	22.3 (57)	6 (15)	1 (2.5)	90 (229)	167 (76)
JW50TBFNA-FV	50 (189)	42,000	41.5 (135)	0.59	63.8 (161)	60.8 (154)	22.3 (57)	6 (15)	1 (2.5)	90 (229)	185 (84)
JW50THBFNA-FV	50 (189)	50,000	42.4 (160)	0.59	64.8 (164)	62.3 (158)	22.3 (57)	6 (15)	1 (2.5)	90 (229)	187 (85)
<b>PROPANE</b>											
6G40BFP-FV	40 (151)	38,000	34 (129)	0.58	54.8 (139)	51.9 (131)	22.3 (57)	6 (15)	1 (2.5)	90 (229)	167 (76)
6G50TBF-FV	50 (189)	42,000	41.5 (135)	0.58	63.8 (161)	60.8 (154)	22.3 (57)	6 (15)	1 (2.5)	90 (229)	185 (84)

\* Zero clearance through outside walls.

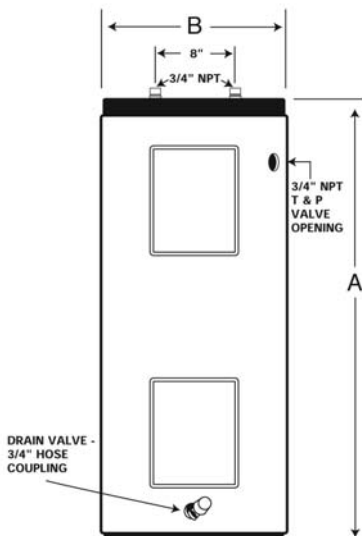
# Residential Electric



The optimum in reliability, performance and energy efficiency.



- Patented Styropour® base for added energy efficiency.
- Thermostatically controlled long life elements.
- Meets latest NRCan energy efficiency regulations.
- NEW Series PRO bottom entry models.
- CFC-free foam insulation.



RESIDENTIAL ELECTRIC WATER HEATERS





# Residential Electric

The optimum in reliability, performance and energy efficiency.

<b>ELECTRIC</b>	Model	Capacity USG/IMP Gallon/Litres	Elements Upper and Lower Watts/Volts	Watt Loss per HR	First HR Rating USG	Height A in. (cm)	Diameter B in. (cm)	Approximate Shipping Weight lb. (kg)
<b>PRO SERIES MODEL</b>								
<b>Top Entry</b>								
	JW50SDE130(JW525)	50/40/184	3000/240	66	58	49 (124)	21.1 (54)	128 (58)
	JW80SDE145(JW805)	80/60/284	4500/240	88	85	60 (152)	22.6 (57)	180 (82)
<b>Bottom Entry</b>								
	JW50SDEB1	50/40/184	3000/240	76	58	49 (124)	21.1 (54)	127 (57)
	JW80SDEB1	80/60/284	4500/240	96	85	60 (152)	22.6 (57)	180 (82)
<b>STANDARD MODELS</b>								
<b>Top Entry</b>								
	JW50SDE145	50/40/184	4500/240	66	58	49 (124)	21.1 (54)	128 (58)
	JW50SDE131	50/40/184	3000/208	66	58	49 (124)	21.1 (54)	128 (58)
	JW50SDE146	50/40/184	4500/208	66	58	49 (124)	21.1 (54)	128 (58)
<b>Top Entry, Single Glassed, Incoloy Element (Hydro Spec.), Double Glassed available</b>								
	JW50SDE138	50/40/184	3800/240	66	58	49 (124)	21.1 (54)	128 (58)
	JW80SDE138	80/60/284	3800/240	66	85	60 (152)	22.6 (57)	180 (82)
<b>Bottom Entry</b>								
	JW1005	100/80/360	4500/240	135	N/A	65.2 (166)	26 (66)	270 (122)
<b>COMFORT SMART MODELS</b>								
<b>Top Entry</b>								
	6G50SDE	50/40/184	3000/240	57	58	49.2 (125)	22.1 (56)	135 (61)
	6G80SDE	80/60/284	4500/240	75	85	60 (152)	24 (61)	185 (84)

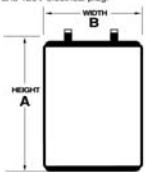


Put hot water right where you need it!

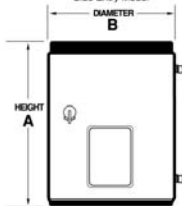


- Designed for installation in cottages, offices, mobile homes and other applications where space is limited.
- Meets latest energy efficiency standards.
- Galvanized bottom pan protects water heater.
- Personnel protector covers elements and controls for added safety.

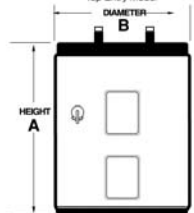
Plug-in Model  
This model includes wall brackets and 120V electrical plug.



Side Entry Model



Top Entry Model







Put hot water right where you need it!

<b>ELECTRIC</b>						
Model	Capacity USG (Litres)	Elements* Watts/Volts	Energy Factor	Height A in. (cm)	Diameter/Width B in. (cm)	Approximate Shipping Weight lb. (kg)
<b>Top Entry</b>						
SS205SE15	2.5 (10)	1500/120	N/A	14 (36)	14 (36)	20 (51)
<b>Side Entry Single Element Models</b>						
SS06SEB15	6 (23)	1500/120 3000/240	N/A	15.75 (40)	14.25 (36)	32 (81)
SS12SEB15	12 (43)	1500/120 3000/240	N/A	22.75 (58)	16 (41)	44 (112)
SS19LSEB15	19 (65)	1500/120 3000/240	N/A	26.13 (66)	19.1 (48)	65 (30)
SS30LSEB15	30 (108)	1500/120 3000/240	0.93	31 (79)	22 (56)	90 (41)
<b>Top Entry Double Element Models</b>						
SS40SDE	40 (143)	1500/120 3000/240	0.92	47 (119)	20 (51)	110 (50)
<b>Lowboy Top Entry Double Element Models</b>						
SS630LDE	30 (108)	4500/240	0.93	31 (79)	22 (56)	98 (44)
SS640LDE	40 (142)	4500/240	0.92	32.38 (82)	24 (61)	126 (57)
SS646LDE	46 (153)	4500/240	0.91	33 (84)	26.13 (66)	162 (73)

\* Specify voltage and wattage required when ordering.

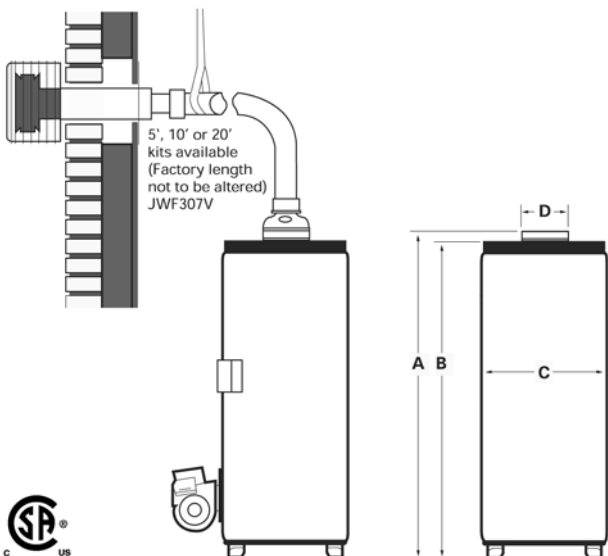
# Residential Oil



Exclusive, patented innovation.



- Immersion-type aquastat for precise water temperature control.
- Universal mounting design fits most burners.
- Ceramic fibre combustion chamber maximizes heat retention.
- Includes blocked flue safety switch.
- Suitable for combination applications, potable water and space heating.





# Residential Oil

Exclusive, patented innovation.

<b>CAPACITY AND PERFORMANCE</b>										
Model*	Capacity USG (Litres)	Standard Firing Rate	BTU Input	First Hour Rating	Recovery Gal./Hr. Rise 90°F/50°C    100°F/55°C	Tube Insertion Length in. (cm)	Combustion Efficiency	Energy Factor EF		
<b>Centre Flue</b>										
JWF307	32 (121)	0.65	91,000	110	92                      84	4.75 (12.1)	77-80%	0.60		
JWF507	50 (189)	0.75	105,000	190	107                     100	5.75 (14.6)	77-80%	0.55		
<b>Direct Vent</b>										
JWF307V	32 (121)	0.65	90,000	110	92	4.75 (12.1)	79-81%	0.60		
<b>ROUGH-IN DIMENSIONS</b>										
Model*	Installation Height A in. (cm)	Height to Top of Heater B in. (cm)	Diameter C in. (cm)	Vent Diameter D in. (cm)	Water Connection in. (mm)	Shipping Weight lb. (kg)				
<b>Centre Flue/Direct Vent</b>										
JWF307/JWF307V	52.75 (134)	50.63 (129)	20 (51)	6 (15)	0.75 (19)	172 (78)				
JWF507	60.5 (154)	58.5 (149)	22 (56)	6 (15)	0.75 (19)	214 (97)				

\*Direct Vent models must use vent kit and burner supplied by John Wood® with pre-purge and post-purge features. Burners are sold separately and warranted by the burner manufacturer.  
For 63 Gallon unit see pages 46 and 47 in this book.

# Oil Fired Burners



GSW offers oil burners designed and engineered by one of the industry's leading oil burner manufacturers.



## **Beckett**

Beckett's residential flame-retention model AFG burner is easy to install and to service, engineered to provide years of reliable service, and backed by solid technical support. The AFG burner comes with a Beckett CleanCut Fuel Unit, Beckett R7184 Series 5 Primary Control, self-centering Nozzle Line Electrode Assembly and one-piece Flame Retention Head.

**[www.beckettcorp.com](http://www.beckettcorp.com)**



# Oil Fired Burners

## Specifications

### Beckett Oil Burners

SKU#	GPH Input	BTU Input
J3006	0.65	91,000
J5006	0.75	105,000
J7006	1.00	138,000

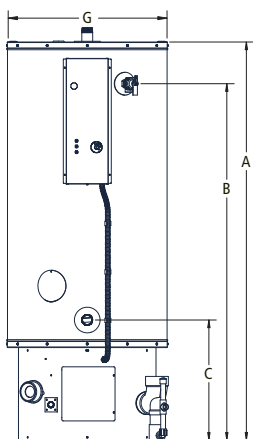
### Burner for Direct Vent Model (JWF307V)

SKU#	GPH Input	BTU Input
J3007	0.65	91,000

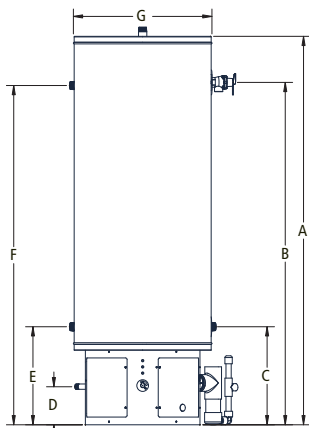
The quiet and efficient way to heat water.



- High grade stainless steel tank with brass connections for years of dependable service – no anode required.
- Submerged combustion chamber with spiral flue for 95-96% thermal efficiency and ultra-low standby heat loss.
- Woven metal fibre burner made of refractory steel resists corrosion, produces low NOx emissions and is resistant to thermal and mechanical shocks.
- Plug-and-play technology with no special adjustments at initial startup including no adjustments or de-rating for high altitude installations.
- Specifically designed for space heating.



100 US GALLON



34-50 US GALLON



The quiet and efficient way to heat water.

<b>RESIDENTIAL GAS POLARIS®</b>												
Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Height A in. (cm)	Height to T&P Valve B in. (cm)	Cold Water Inlet* C in. (cm)	Gas Inlet D in. (cm)	Heating System Inlet* E in. (cm)	Heating System Outlet* F in. (cm)	Diameter G in. (cm)	Vent Diameter in. (cm)	Shipping Weight lb. (kg)
<b>NATURAL GAS</b>												
PR100-34-2NV	34 (129)	100,000	129 (488)	48.5 (123)	41 (104)	15.75 (40)	6.13 (16)	15.75 (40)	40.5 (103)	22 (56)	2-3 (5-7.5)	150 (68)
PR130-34-2NV	34 (129)	130,000	166 (75)	48.5 (123)	41 (104)	15.75 (40)	6.13 (16)	15.75 (40)	40.5 (103)	22 (56)	2-3 (5-7.5)	150 (68)
PR150-34-2NV	34 (129)	150,000	188 (712)	48.5 (123)	41 (104)	15.75 (40)	6.13 (16)	15.75 (40)	40.5 (103)	22 (56)	2-3 (5-7.5)	150 (68)
PR130-50-2NV	50 (189)	130,000	166 (75)	62.5 (159)	55 (140)	15.75 (40)	6.13 (16)	15.75 (40)	54.5 (138)	22 (56)	2-3 (5-7.5)	176 (80)
PR199-100-3NV	100 (379)	199,000	257 (117)	70 (178)	63 (160)	23.25 (59)	6.38 (16)	23.25 (59)	56.25 (143)	28 (71)	3 (7.5)	468 (212)
<b>PROPANE</b>												
PR100-34-2PV	34 (129)	100,000	129 (488)	48.5 (123)	41 (104)	15.75 (40)	6.13 (16)	15.75 (40)	40.5 (103)	22 (56)	2-3 (5-7.5)	150 (68)
PR130-34-2PV	34 (129)	130,000	166 (75)	48.5 (123)	41 (104)	15.75 (40)	6.13 (16)	15.75 (40)	40.5 (103)	22 (56)	2-3 (5-7.5)	150 (68)
PR130-50-2PV	50 (189)	130,000	166 (75)	62.5 (159)	55 (140)	15.75 (40)	6.13 (16)	15.75 (40)	54.5 (138)	22 (56)	2-3 (5-7.5)	176 (80)
PR199-100-3PV	100 (379)	199,000	257 (117)	70 (178)	63 (160)	23.25 (59)	6.38 (16)	23.25 (59)	56.25 (143)	28 (71)	3 (7.5)	468 (212)

\* 1" NPT water connections on 34 & 50 US gallon units, 1 1/2" NPT on 100 US gallon model.

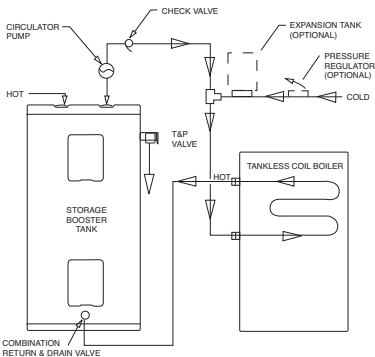
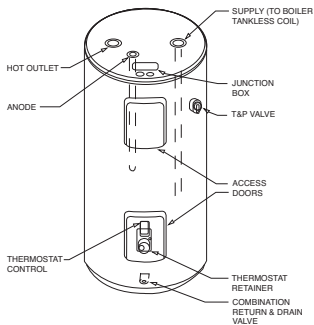
# Storage Booster Tanks



Exclusive, patented innovation.



- Equipped with an adjustable thermostat, pre-wired and ready for connection to a circulator pump for accurate and automatic temperature control.
- Factory-installed nipples for easy installation.
- 2" of CFC-free foam insulation.







# Storage Booster Tanks

Exclusive, patented innovation.

## CAPACITY & DIMENSIONS

Model	Capacity USG (Litres)	Water Connections in. NPT	Height in. (cm)	Diameter in. (cm)	Shipping Weight lb. (kg)
JW5-40SB	40 (151)	0.75	47.25 (120)	20 (51)	123 (56)
JW5-50SB	50 (189)	0.75	48.75 (124)	22 (56)	136 (62)
JW5-80SB	80 (303)	0.75	59 (150)	24 (61)	201 (91)

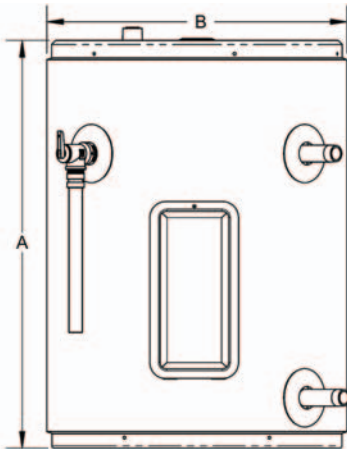
All models comply with ASHRAE, 90.1-b-1992 standards.

# FlowTHRU®

Storage tanks specifically designed by GSW to complement our tankless series of water heaters.



- Exclusive, patented TankSaver® design works to prolong tank life.
- Factory installed dielectric nipples for ease of installation.
- T&P valve conveniently located on the side.
- Top access junction box for convenient electrical hook-up.
- Equipped with an adjustable thermostat, pre-wired and ready for connection to a circulator pump.



Storage tanks specifically designed by GSW to complement our tankless series of water heaters.

<b>DIMENSIONS</b>				
Model	Capacity USG/IMP Gallon/Litres	Height A in. (cm)	Diameter B in. (cm)	Shipping Weight lb. (kg)
ST-20	19/14/67	25.6 (65)	19.1 (49)	65 (29)
ST-30	30/22/108	31.5 (80)	22.5 (57)	94 (42)

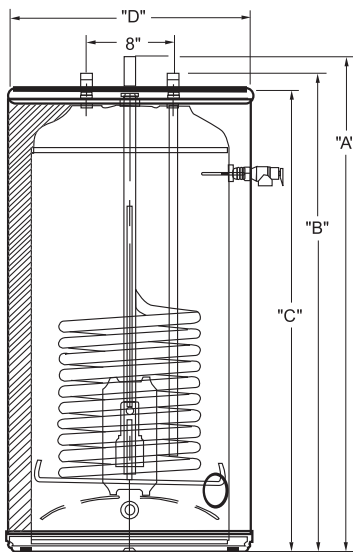
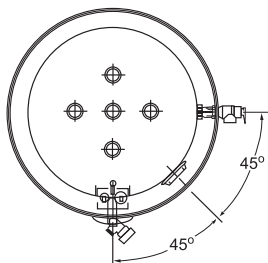
# Indirect Water Heaters



Exclusive, patented innovation.



- Accurate automatic surface mount thermostat.
- Glass-lined coil for efficient heat transfer.
- Clean-out port for lime removal on 75 gallon models.
- 3/4" NPT boiler connections.
- 2" of CFC-free foam insulation.





# Indirect Water Heaters

Exclusive, patented innovation.

## CAPACITY & PERFORMANCE

Model	Capacity USG (Litres)	Boiler Output BTU	First Hr. Rating 90°F/50°C Rise USG (Litres)	Continuous Flow USG (Litres)	Coil Length in. (cm)
JW5-30IT	30 (110)	40,000	70 (265)	69 (261)	29 (74)
		60,000	98 (371)	104 (394)	
		80,000	125 (473)	139 (526)	
		100,000	152 (575)	173 (655)	
JW5-40IT	40 (150)	40,000	84 (318)	69 (261)	39.5 (100)
		60,000	111 (420)	104 (394)	
		80,000	138 (522)	139 (526)	
		100,000	165 (625)	173 (655)	
JW5-75IT	75 (300)	40,000	120 (454)	70 (265)	47.25 (120)
		60,000	148 (560)	105 (397)	
		80,000	175 (662)	140 (530)	
		100,000	201 (761)	174 (659)	
		120,000*	229 (867)	209 (791)	

## ROUGH-IN DIMENSIONS

Model	Height to Top of Coil Connection A		Height to Top of Potable Water Connection B		Height to Top of Heater C		Diameter D		Shipping Weight	
	in. (cm)	in. (cm)	in. (cm)	in. (cm)	in. (cm)	in. (cm)	in. (cm)	lb. (kg)	lb. (kg)	
JW5-30IT	35 (89)	34 (86)	32 (81)	22 (56)	130 (59)					
JW5-40IT	45.5 (116)	44 (112)	42.5 (108)	22 (56)	160 (73)					
JW5-75IT	56 (142)	54 (137)	53 (135)	26 (66)	270 (122)					

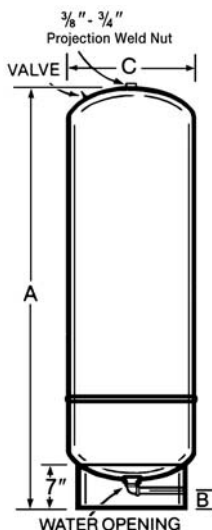
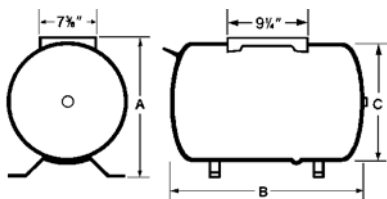
\* When the boiler input exceeds 100,000 BTU/H and if the unit has a factory supplied T&P valve, it must be replaced with one rated for that input.  
Head Loss: 3GPM-9" W.C., 5GPM - 24" W.C., 8GPM - 62" W.C.

# Diaphragm Pump Tanks

Capacities from 2 to 119 US Gallons.



- Positive lock retention system ensures controlled compression in the diaphragm connection, eliminating the loss of air or water from the tank.
- Interior epoxy coating permanently bonded to the tank shell provides the ultimate protection on the water side of the tank.
- Durable butyl diaphragm ensures long life.
- Undercoated with zinc phosphate for the highest corrosion resistance.
- Welded steel base.



# Diaphragm Pump Tanks

## Specifications

<b>PUMP TANK SPECIFICATIONS</b>						
Model	Volume USG (Litres)	CONN NPT Size* in.	Overall Height A in. (cm)	To Center of Water Inlet B in. (cm)	Diameter C in. (cm)	Weight lb (kg)
<b>FREE-STANDING</b>						
JPTI-2	2 (7.6)	0.75 (M)	12.5 (32)	N/A	8.38 (21)	4.5 (2)
JPTI-5	4.6 (17.4)	0.75 (M)	14.75 (37.5)	N/A	11.38 (29)	7.5 (3.4)
JPTI-7	7 (26.5)	0.75 (M)	18.88 (48)	N/A	11.38 (29)	7 (3.1)
JPTI-14	14 (53)	1 (M)	24 (61)	2 (5)	15.38 (39)	24 (11)
JPTI-14	14 (53)	1 (F)	24 (61)	2 (5)	15.38 (39)	24 (11)
JPTI-20	20 (75.7)	1 (F)	31 (74)	2 (5)	15.38 (39)	34 (15.4)
JPTI-26	26 (98.4)	1 (F)	38.5 (98)	2 (5)	15.38 (39)	40 (18.1)
JPTI-32	32 (121)	1 (F)	46 (117)	2 (5)	15.38 (39)	52 (23.6)
JPTI-45	45 (170)	1.25 (F)	35.5 (90)	2 (5)	22 (56)	65 (29.5)
JPTI-65	65 (246)	1.25 (F)	47.5 (121)	2 (5)	22 (56)	90 (40.8)
JPTI-85	85 (322)	1.25 (F)	60.13 (153)	2 (5)	22 (56)	114 (51.7)
JPTI-86	86 (326)	1.25 (F)	45.75 (116)	2 (5)	26 (66)	116 (52.6)
JPTI-119	119 (450)	1.25 (F)	61 (155)	2 (5)	26 (66)	161 (73)
<b>HORIZONTAL</b>						
JPTH-7	7 (26.5)	1 (M)	18.88 (48)	N/A	11.38 (29)	11 (5)
JPTH-14	14 (53)	1 (M)	20 (51)	N/A	15.38 (39)	24 (11)
JPTH-20	20 (75.7)	1 (M)	28 (71)	N/A	15.38 (39)	34 (15.4)

\* M = Male, F = Female

# Thermal Expansion Tanks

The perfect solution for controlling thermal expansion.



- Available for hydronic or potable water applications.
- Durable drawn steel construction with 2-coat bonded polymer inner lining.
- Heavy duty butyl diaphragm, for permanent separation of air and water.
- IAPMO approved.
- Suitable for residential and commercial water heaters.
- In-line design, with 3/4" NPT connection: installs in cold water line of water heater.
- Field-adjustable 40 psi air charge on potable models, 12 psi on hydronic models.
- Maximum working pressure 150 psi on potable models, 100 psi on hydronic models.
- Maximum temperature: 180°F on potable models, 240°F on hydronic models.
- NSF 61 approved on potable water tanks.



# Thermal Expansion Tanks

## Specifications

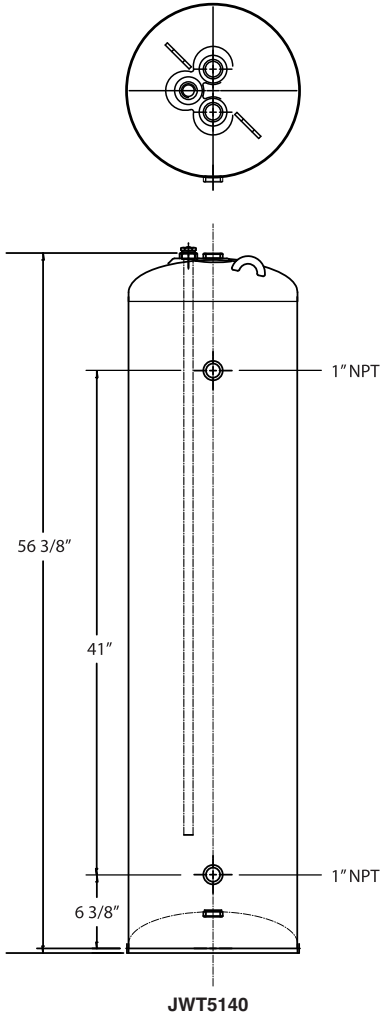
<b>EXPANSION TANK SPECIFICATIONS</b>								
Model	Maximum Pressure PSIG (kPa)	Tank Volume USG (Litres)	Maximum Accepted Volume USG (Litres)		CONN Size in. NPT	Overall in. (cm)	Diameter in. (cm)	Weight lb. (kg)
			20 PSI (138 kPa)	40 PSI (276 kPa)   60 PSI (414 kPa)				
<b>POTABLE EXPANSION TANKS</b>								
JET-2	150 (1034)	1.96 (7.4)	N/A	1.27 (4.8)	0.75	12.5 (32)	8.38 (21)	5 (2.3)
JET-5	150 (1034)	4.55 (17.2)	N/A	3 (11.5)	0.75	14.75 (37.5)	11.38 (29)	8 (3.6)
JET-10	150 (1034)	9.25 (35)	N/A	6.55 (24.8)	0.75	15.75 (60)	15.38 (58)	20 (9)
<b>HYDRONIC EXPANSION TANKS</b>								
JETH-2	100 (689)	1.96 (7.4)	1.53 (5.8)	N/A	0.5	12.5 (32)	8.38 (21)	5 (2.3)
JETH-5	100 (689)	4.55 (17.2)	3.75 (14)	N/A	0.5	14.75 (37.5)	11.38 (29)	8 (3.6)
JETH-7	100 (689)	7.3 (27.6)	4.6 (17.4)	N/A	0.5	21.13 (80)	11.38 (29)	11 (5)
JETH-14	100 (689)	14.6 (55.3)	10.5 (39.7)	N/A	0.5	21.63 (82)	15.38 (58)	22 (10)

# Range Boiler

Glass-lined, painted tank.

## JWT5140

- 40 US Gallon Capacity/151 L.
- 14" Diameter.
- 1" Pipe Connections.
- 150 PSI working pressure.



# Commercial

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# Signature Series

A proud tradition of leadership.



The new John Wood® Signature Series has been specifically designed for the needs of the professional installer. Our new gas models now deliver lower profiles for easy installation and maintenance, as well as smaller vent diameters and ultra-accurate dual electric thermostats for precision and control. What's more, our Signature Series electric models are custom built-to-order to ensure your exact specifications are met. All of our heaters offer advanced features such as TankSaver® stainless steel inserts and glass-lined tanks for longer life.

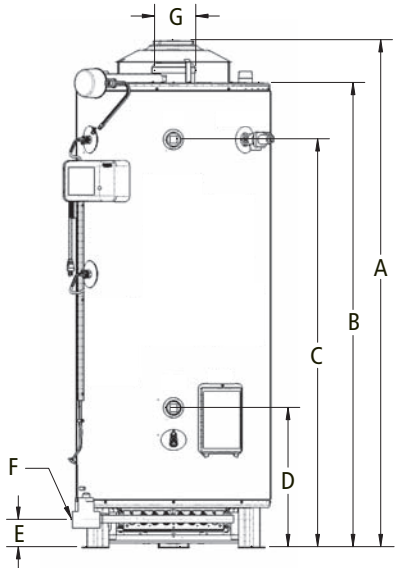
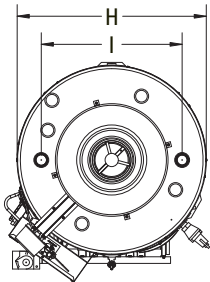
# Signature Series Gas



A proud tradition of leadership.



- Dependable three-leg design for better leveling.
- Galvanized steel bottom for long life.
- CFC-free foam insulation.
- Meets or exceeds ASHRAE 90.1 1999 energy efficiency standards.
- Removable anodes protect the inner glass-lined tank.
- Robust 1/4" pilot tubing.





# Signature Series Gas

A proud tradition of leadership.

Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Overall Height A in. (cm)	Height to Top of Tank B in. (cm)	Height to Hot Water Outlet C in. (cm)	Height to Cold Water Inlet D in. (cm)	Height to Gas Inlet E in. (cm)	Gas Inlet F in. (cm)	Vent Diameter G in. (cm)	Water Heater Diameter H in. (cm)	Approx. Shipping Weight lb. (kg)
JWSC75-125N	75 (284)	125,000	121 (463)	68.75 (175)	62.38 (158)	54 (137)	20.25 (51)	4.25 (11)	0.75 (2)	6 (15)	26.56 (68)	478 (217)
JWSC80-199N	80 (303)	199,000	193 (738)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	576 (262)
JWSC80-250N	80 (303)	250,000	242 (927)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	576 (262)
JWSC100-199N	100 (379)	199,000	193 (738)	74.5 (189)	69 (175)	60.5 (153)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	616 (280)
JWSC100-270N	100 (379)	270,000	262 (1001)	78.75 (200)	69.13 (176)	60.75 (154)	20.75 (53)	4.25 (11)	0.75 (2)	7 (18)	28.5 (72)	628 (285)
JWSC75-300N	75 (284)	300,000	291 (1112)	72.5 (184)	64 (163)	55.75 (141)	22.75 (58)	5.25 (13)	0.75 (2)	7 (18)	28.5 (72)	590 (268)
JWSC75-360N	75 (284)	360,000	349 (1335)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	640 (291)
JWSC75-399N	75 (284)	399,000	387 (1479)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	640 (291)
AJWSC80-199N	80 (303)	199,000	193 (738)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	696 (316)
AJWSC80-250N	80 (303)	250,000	242 (927)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	696 (316)
AJWSC100-199N	100 (379)	199,000	193 (738)	74.5 (189)	69 (175)	60.5 (153)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	635 (289)
AJWSC100-270N	100 (379)	270,000	262 (1001)	78.75 (200)	69.13 (176)	60.75 (154)	20.75 (53)	4.25 (11)	0.75 (2)	7 (18)	28.5 (72)	647 (294)
AJWSC75-300N	75 (284)	300,000	291 (1112)	72.5 (184)	64 (163)	55.75 (141)	22.75 (58)	5.25 (13)	0.75 (2)	7 (18)	28.5 (72)	716 (325)
AJWSC75-360N	75 (284)	360,000	349 (1335)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	750 (341)
AJWSC75-399N	75 (284)	399,000	387 (1479)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	750 (341)

ASME

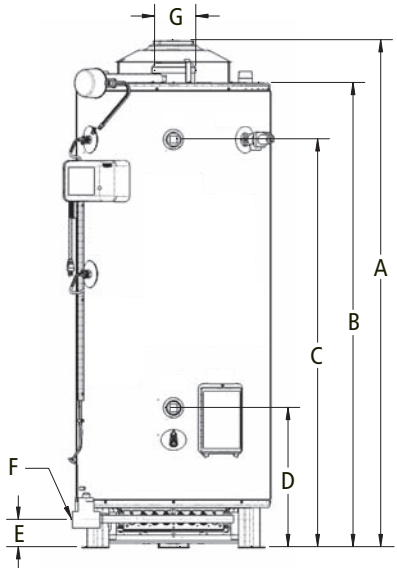
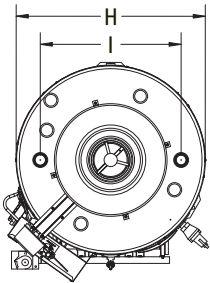
# Signature Series Propane



A proud tradition of leadership.



- Dependable three-leg design for better leveling.
- Galvanized steel bottom for long life.
- CFC-free foam insulation.
- Meets or exceeds ASHRAE 90.1 1999 energy efficiency standards.
- Removable anodes protect the inner glass-lined tank.
- Robust 1/4" pilot tubing.







# Signature Series Propane

A proud tradition of leadership.

Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Overall Height A in. (cm)	Height to Top of Tank B in. (cm)	Height to Hot Water Outlet C in. (cm)	Height to Cold Water Inlet D in. (cm)	Height to Gas Inlet E in. (cm)	Gas Inlet F in. (cm)	Vent Diameter G in. (cm)	Water Heater Diameter H in. (cm)	Approx. Shipping Weight lb. (kg)
JWSC75-125P	75 (284)	125,000	121 (463)	68.75 (175)	62.38 (158)	54 (137)	20.25 (51)	4.25 (11)	0.75 (2)	6 (15)	26.56 (68)	478 (217)
JWSC80-199P	80 (303)	199,000	193 (738)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	576 (262)
JWSC80-250P	80 (303)	250,000	242 (927)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	576 (262)
JWSC100-199P	100 (379)	199,000	193 (738)	74.5 (189)	69 (175)	60.5 (153)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	616 (280)
JWSC100-270P	100 (379)	270,000	262 (1001)	78.75 (200)	69.13 (176)	60.75 (154)	20.75 (53)	4.25 (11)	0.75 (2)	7 (18)	28.5 (72)	628 (285)
JWSC75-300P	75 (284)	300,000	291 (1112)	72.5 (184)	64 (163)	55.75 (141)	22.75 (58)	5.25 (13)	0.75 (2)	7 (18)	28.5 (72)	590 (268)
JWSC75-360P	75 (284)	360,000	349 (1335)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	640 (291)
JWSC75-399P	75 (284)	399,000	387 (1479)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	640 (291)
AJWSC80-199P	80 (303)	199,000	193 (738)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	696 (316)
AJWSC80-250P	80 (303)	250,000	242 (927)	73.75 (187)	62 (158)	53.75 (136)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	696 (316)
AJWSC100-199P	100 (379)	199,000	193 (738)	74.5 (189)	69 (175)	60.5 (153)	20.75 (53)	4.25 (11)	0.75 (2)	6 (15)	28.5 (72)	635 (289)
AJWSC100-270P	100 (379)	270,000	262 (1001)	78.75 (200)	69.13 (176)	60.75 (154)	20.75 (53)	4.25 (11)	0.75 (2)	7 (18)	28.5 (72)	647 (294)
AJWSC75-300P	75 (284)	300,000	291 (1112)	72.5 (184)	64 (163)	55.75 (141)	22.75 (58)	5.25 (13)	0.75 (2)	7 (18)	28.5 (72)	716 (325)
AJWSC75-360P	75 (284)	360,000	349 (1335)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	750 (341)
AJWSC75-399P	75 (284)	399,000	387 (1479)	71.5 (182)	62.5 (159)	53.25 (135)	30.75 (78)	4.25 (11)	0.75 (2)	8 (20)	28.5 (72)	750 (341)

ASME

# Conversion and De-rate Kits

New pre-certified kits for all Signature Series models.

<b>CONVERSION and DE-RATE KITS</b>								
	JWS75-125N/P	(A)JWS80-199N/P	(A)JWS80-250N/P	(A)JWS100-199N/P	(A)JWS100-270N/P	(A)JWS75-300N/P	(A)JWS75-360N/P	(A)JWS75-399N/P
<b>NATURAL GAS TO LP</b>								
	59101	59103	59105	59103	59107	59109	59111	59113
<b>LP TO NATURAL GAS</b>								
	59102	59104	59106	59104	59108	59110	59112	59114
<b>DE-RATE KITS FOR NATURAL GAS</b>								
2001-4500'	59121	59122	59123	59122	59124	59125	59126	59127
4501-6000'	59131	59132	59133	59132	59134	59135	59136	59137
6001-8000'	59141	59142	59143	59142	59144	59145	59146	59147
<b>DE-RATE KITS FOR LIQUID PROPANE</b>								
2001-4500'	59151	59152	59153	59152	59154	59155	59156	59157
4501-6000'	59161	59162	59163	59162	59164	59165	59166	59167
6001-8000'	59171	59172	59173	59172	59174	59175	59176	59177

CSA-approved kits allow field conversions with no need for additional inspections or costs.

# Power Vent Kits

Advanced technology with Tjernlund venting products for all Signature Series models.

## POWER VENT KITS

Part #	BTU	Max. Equivalent (ft.)	Vent Diameter (in.)	Weight (lb.)
59028	125,000 thru 250,000	100*	4 to 6	20
59029	270,000 thru 399,000	100	6	22

Includes 40' Quick Connect interlock cable.  
Can be installed with zero clearance to combustible materials.  
Stainless steel construction in critical areas.  
Factory wired safety and operating controls.  
Ultra-fine draft adjustment and slide-out access to all internal components.

\* Consult installation manual for vent length vs. vent diameter.

## POWER VENT KITS



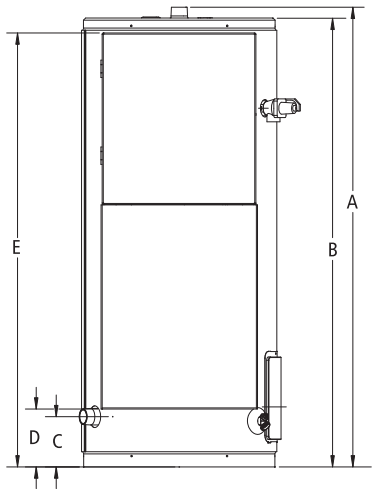
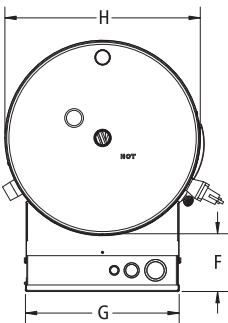
# Signature Series Electric



Custom built-to-order.



- Meets or exceeds ASHRAE Efficiency Standards.
- Factory installed 1 1/2" dielectric cold water inlet and hot water outlet nipples for ease of installation.
- 2" CFC-free foam insulation.
- Conveniently located handhole cleanout.
- Factory installed T&P and brass drain valve.





## Configure Your Model:

1. Select surface thermostat (JW-ES) or immersion thermostat (JW-EI)
2. Select size (50, 80 or 119 US gallons)
3. Select input from 6 to 54 KW
4. Select voltage: 208, 240, or 600
5. Select phase 1 or 3
6. e.g., JW-EI-80-450-240-3 is an 80-US gallon, 45 KW, 240 volt, 3 phase Signature Series Commercial Electric water heater with an immersion thermostat.

## DIMENSIONS

Model	Capacity USG (Litres)	Height to Hot Water Outlet A in. (cm)	Height B in. (cm)	Height to Cold Water Inlet C in. (cm)	Height to Bottom of Panel D in. (cm)	Height to Top of Panel E in. (cm)	Panel Depth F in. (cm)	Panel Width G in. (cm)	Diameter H in. (cm)	Approx. Shipping Weight lb. (kg)
JW-E(S/I)-50	50 (189)	53 (135)	51 (131)	6.25 (16)	6.5 (17)	49.5 (126)	5.19 (13)	17.5 (44)	22.25 (57)	277 (126)
JW-E(S/I)-80	80 (303)	63 (161)	61.5 (156)	6.25 (16)	6.5 (17)	57 (145)	5.19 (13)	17.5 (44)	24.25 (62)	338 (153)
JW-E(S/I)-119	119 (450)	66.75 (170)	64.5 (164)	6 (15)	6.5 (17)	57.25 (145)	5.19 (13)	17.5 (44)	28.5 (72)	457 (207)

## KW POWER INPUT and RECOVERY

KW Power Input												
6	9	12	13.5	15	18	24	27	30	36	40.5	45	54
Recovery @ 100°F/55°C Rise US Gal. (Litres)												
24 (91)	37 (140)	49 (185)	55 (208)	61 (231)	73 (276)	98 (371)	110 (416)	122 (462)	147 (556)	165 (625)	184 (697)	220 (833)

## CONFIGURE YOUR MODEL

JW(S/I)TCE(1/3)-50 50 US Gallon	JW(S/I)TCE(1/3)-80 80 US Gallon	JW(S/I)TCE(1/3)-119 119 US Gallon
KW Power Input	6-54	6-54
Volts	208, 240 or 600	6-54

# Commercial Oil

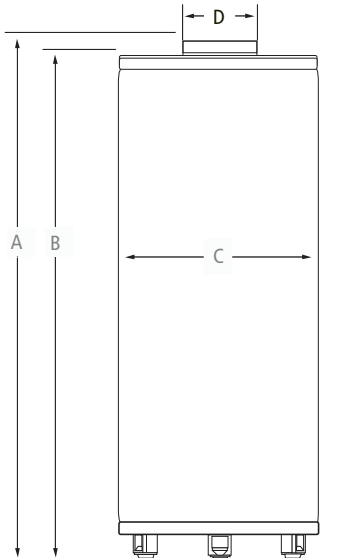


High output, high efficiency.



See pages 22 & 23  
for Oil Fired Burners

- Multi-flue design for fast recovery.
- Equipped with multiple anode rods for long life.
- Factory installed T&P and drain valve.
- Universal mounting design suits most burners.
- Includes blocked flue safety switch in accordance with CSA B140.0-03.
- TankSaver® technology.





# Commercial Oil

High output, high efficiency.

<b>DIMENSIONS</b>						
Model	Height to Flue A in. (cm)	Height to Top of Tank B in. (cm)	Diameter C in. (cm)	Flue Diameter D in. (cm)	Water Connections in. (mm)	Shipping Weight lb. (kg)
JWF657	68.75 (175)	65.38 (166)	26 (66)	6 (15)	1 (25)	379 (172)
<b>CAPACITY and PERFORMANCE</b>						
Model	Capacity USG (Litres)	Firing Rate USG	BTU Input	Recovery 100°F rise USG	55°C rise Litres	Blast Tube Insertion Length in. (cm)
JWF657	63 (238)	1-1.25	138,500	129	488	7.75 (20)
						Combustion Efficiency
						82-86%

## Beckett Oil Burners

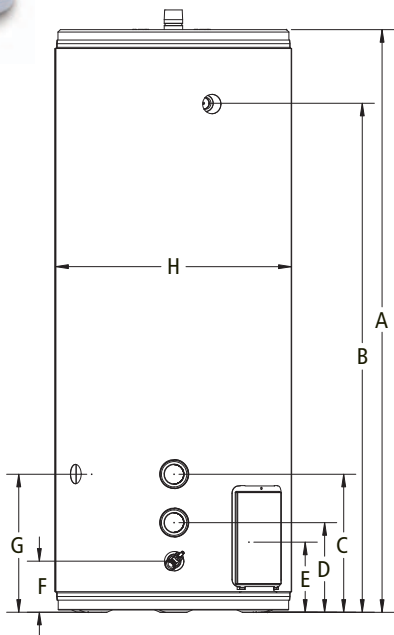
SKU#	GPH Input	BTU Input
J7006	1.00	138,000

# Signature Series Storage Tanks

Available in 80 and 119 US Gallon models.



- Equipped with multiple anode rods for long life.
- Conveniently located handhole cleanout.
- Factory installed 2" dielectric nipples and brass drain valve on insulated models.
- 2" CFC-free foam insulation on CST-119 and CST-80.
- Front inlet and outlet for recirculation.





# Signature Series Storage Tanks

Available in 80 and 119 US Gallon models.

<b>DIMENSIONS</b>										
Model	Capacity USG (Litres)	Height A in. (cm)	Height to T&P Valve B in. (cm)	Upper Connection C in. (cm)	Lower Connection D in. (cm)	Handhole Cleanout E in. (cm)	Drain Valve F in. (cm)	Aquastat Opening G in. (cm)	Diameter H in. (cm)	Shipping Weight lb. (kg)
CST-119	119 (454)	65.38 (166)	55.38 (141)	15.25 (39)	10.5 (27)	8.5 (22)	8.75 (22)	15.5 (39)	28 (71)	342 (155)
CE-119 bare-tank	119 (454)	61.5 (156)	53.13 (135)	13.75 (35)	8.75 (22)	6.5 (17)	4.75 (12)	13.75 (35)	24.5 (62)	222 (101)
CST-80	80 (284)	60.25 (153)	52.25 (133)	14 (36)	9 (23)	7 (18)	5 (13)	14 (36)	24 (61)	195 (88)
CE-80 bare-tank	80 (284)	58 (147)	51.5 (131)	13.38 (34)	8.5 (22)	6.13 (16)	4.5 (11)	13.13 (34)	20.5 (52)	134 (61)

# Light Duty Commercial Gas

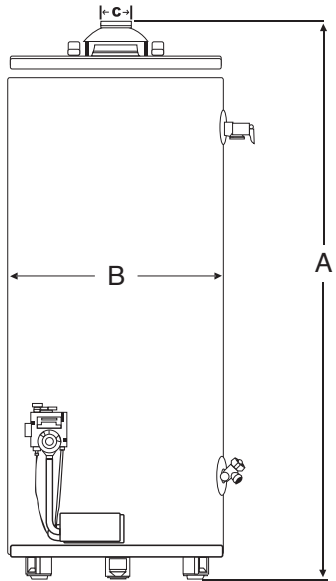


The right fit for lower demand commercial applications.



JW3-75-3NC Model

- Dependable three-leg design for better leveling.
- Galvanized steel bottom for long life.
- CFC-free foam insulation.
- Meets new NRCan energy efficiency standards.
- 180°F thermostat to meet commercial water requirements.





# Light Duty Commercial Gas

The right fit for lower demand commercial applications.

<b>MODELS</b>									
Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Top of Vent A in. (cm)	Diameter B in. (cm)	Vent Diameter C in. (cm)	Approx. Shipping Weight lb. (kg)		
<b>NATURAL GAS</b>									
JW6058NA-FV	60 (227)	58,000	53 (200)	63 (160)	24.63 (63)	4 (10)	206 (93)		
JW3-75-3NC	75 (284)	76,000	67 (252)	65.75 (167)	26 (66)	4 (10)	272 (123)		
JW65-95NED*	65 (246)	95,000	92 (348)	70 (178)	26 (66)	5 (13)	380 (172)		
JW80-160NED*	80 (303)	160,000	154 (582)	79.25 (201)	28 (71)	6 (15)	467 (212)		
<b>LIQUID PROPANE</b>									
JW60-58PC-FV	60 (227)	58,000	53 (200)	63 (160)	24.63 (63)	4 (10)	206 (93)		
JW3-75-3PC	75 (284)	76,000	67 (252)	65.75 (167)	26 (66)	4 (10)	272 (123)		
JW65-95PED*	65 (246)	95,000	92 (348)	70 (178)	26 (66)	5 (13)	380 (172)		
JW80-160PED*	80 (303)	160,000	154 (582)	79.25 (201)	28 (71)	6 (15)	467 (212)		

\* Power Vent Kits are available for these models. High altitude models de-rated by 10% as per CSA.

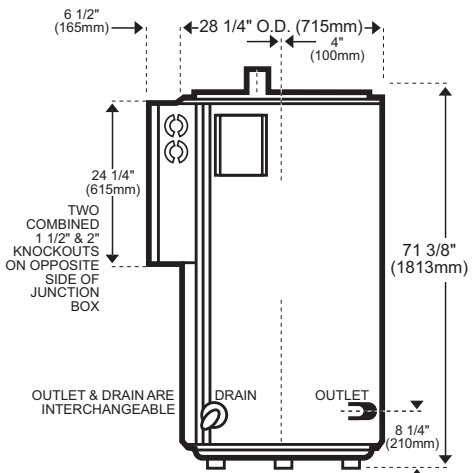
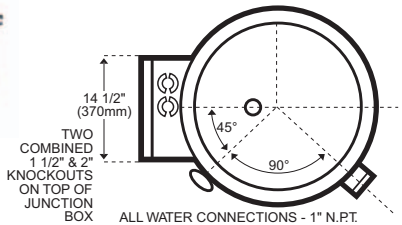
# Light Duty Commercial Electric



The right fit for lower demand commercial applications.



- Automatic temperature control.
- CFC-free foam insulation.
- Heavy duty contactors designed to handle all anticipated loads.
- Over temperature protection.
- Wide range of electrical knockouts.





# Light Duty Commercial Electric

The right fit for lower demand commercial applications.

<b>MODELS</b>											
Model	Capacity Imp. Gallons	Max. No. of Elements	Phase	208 Volts Max. kW		240 Volts Max. kW		600 Volts Max. kW		Total Connected	Total Connected
				Per Element	Total Connected	Per Element	Total Connected*	Per Element	Total Connected		
JWE1202A	100	2	Single	5	10	6	12				
JWE1204A	100	4	Single	5	20	6	24				
JWE1206A	100	6	Single	5	30	6	36				
JWE1206B	100	6	Three	5	30	6	36				
JWE1206C	100	6	Three							6	36
JWE1209A	100	9	Single	5	45	6	54				
JWE1209C	100	9	Three							6	54

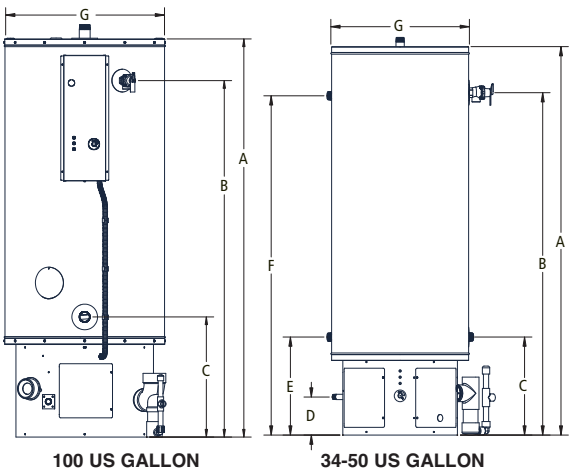
\*Total connected load represents maximum kW input, other combinations available.



The quiet and efficient way to heat water.



- High grade stainless steel tank with brass connections for years of dependable service – no anode required.
- Submerged combustion chamber with spiral flue for 95-96% thermal efficiency and ultra-low standby heat loss.
- Woven metal fibre burner of refractory steel resists corrosion, produces low NOx emissions and is resistant to thermal and mechanical shocks.
- Uniform combustion provides excellent heat transfer.
- Plug-and-play technology with no special adjustments at initial startup including no adjustments or de-rating for high altitude installations.





The quiet and efficient way to heat water.

<b>COMMERCIAL GAS POLARIS®</b>												
Model	Capacity USG (Litres)	BTU Input	Recovery @ 100°F/55°C Rise USG (Litres)	Height A in. (cm)	Height to T&P Valve B in. (cm)	Cold Water Inlet* C in. (cm)	Gas Inlet D in. (cm)	Heating System Inlet* E in. (cm)	Heating System Outlet* F in. (cm)	Diameter G in. (cm)	Vent Diameter in. (cm)	Shipping Weight lb. (kg)
<b>NATURAL GAS</b>												
PC130-34-2NV	34 (129)	130,000	151 (572)	48.5 (123)	41 (104)	15.75 (40)	6.13 (16)	15.75 (40)	40.5 (103)	22 (56)	2-3 (5-7.5)	150 (68)
PC130-50-2NV	50 (189)	130,000	151 (572)	62.5 (159)	55 (140)	15.75 (40)	6.13 (16)	15.75 (40)	54.5 (138)	22 (56)	2-3 (5-7.5)	170 (77)
PC175-50-3NV	50 (189)	175,000	204 (772)	63.75 (162)	56.25 (143)	15.75 (40)	6.13 (16)	15.75 (40)	55.75 (142)	22 (56)	3 (7.5)	180 (82)
PC199-50-3NV	50 (189)	199,000	232 (878)	63.75 (162)	56.25 (143)	15.75 (40)	6.13 (16)	15.75 (40)	55.75 (142)	22 (56)	3 (7.5)	180 (82)
PC199-100-3NV	100 (379)	199,000	232 (878)	70 (178)	63 (160)	23.25 (59)	6.38 (16)	23.25 (59)	56.25 (143)	28 (71)	3 (7.5)	468 (212)
<b>PROPANE</b>												
PC130-34-2PV	34 (129)	130,000	151 (572)	48.5 (123)	41 (104)	15.75 (40)	6.13 (16)	15.75 (40)	40.5 (103)	22 (56)	2-3 (5-7.5)	150 (68)
PC130-50-2PV	50 (189)	130,000	151 (572)	62.5 (159)	55 (140)	15.75 (40)	6.13 (16)	15.75 (40)	54.5 (138)	22 (56)	2-3 (5-7.5)	170 (77)
PC175-50-3PV	50 (189)	175,000	204 (772)	63.75 (162)	56.25 (143)	15.75 (40)	6.13 (16)	15.75 (40)	55.75 (142)	22 (56)	3 (7.5)	180 (82)
PC199-50-3PV	50 (189)	199,000	232 (878)	63.75 (162)	56.25 (143)	15.75 (40)	6.13 (16)	15.75 (40)	55.75 (142)	22 (56)	3 (7.5)	180 (82)
PC199-100-3PV	100 (379)	199,000	232 (878)	70 (178)	63 (160)	23.25 (59)	6.38 (16)	23.25 (59)	56.25 (143)	28 (71)	3 (7.5)	468 (212)

\* 1" NPT water connections on 34 & 50 US gallon units, 1 1/2" NPT on 100 US gallon model.

**JW** John Wood

# SIGNATURE SERIES



John Wood® Signature Series Gas Commercial Water Heaters are designed specifically for professional installers.



Intelligent electronic integrated control, featuring:

- Self diagnostic
- Displays error codes
- Ease of accurate temperature settings
- Displays temperature at each sensor
- Temperature can be adjusted from 90°F to 180°F
- All connections inside the integrated control are not interchangeable
- Ease of serviceability and installation



# Tankless

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### **Residential Models**

John Wood® residential water heaters by Noritz are designed to provide abundant hot water for the entire home. All residential tankless water heaters are backed by a 10-year warranty.

### **Commercial Models**

Commercial tankless water heaters use commercial grade materials, such as a coated copper heat exchanger and 25% thicker piping than the residential models, making John Wood® commercial water heaters unique. Up to 24 can be linked with a system controller to provide abundant hot water for heavy industrial applications.

### **Direct Vent, Sealed Combustion Models**

John Wood® offers Direct Vent models for use in areas where combustion air from indoors is not available, such as spas, hair salons, or air tight spaces. John Wood® Direct Vent models take air from outside for combustion. The John Wood® line includes the only commercial Direct Vent unit on the market. This unit has a coated copper heat exchanger and 25% thicker piping than residential models to ensure years of service.

### **Quick-Connect**

All John Wood® commercial, direct vent and most residential models are Quick-Connect compatible, allowing two units to be installed in series, doubling water capacity when needed.

### **Accessories**

GSW offers a full line of accessories making installation quicker and easier, not to mention cleaner and more aesthetically pleasing. GSW is the “one-stop shop,” supplying everything from tankless water heaters to valves to stainless steel venting.

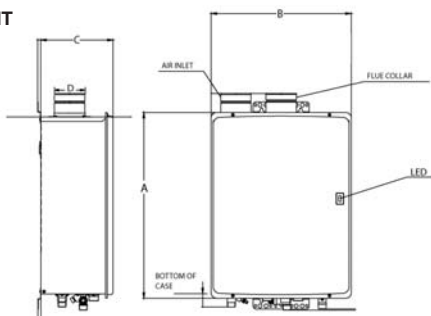
# John Wood<sup>®</sup> by Noritz

Tankless for professionals.

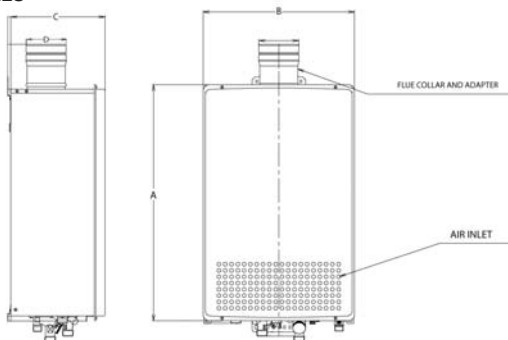


- Product line includes the highest input commercial tankless water heater and the only direct vent model on the market.
- State-of-the-art gas combustion technology maximizes output and provides temperature stability, while maintaining low emissions.
- High-tech electronics provide precise control and safety, while minimizing temperature fluctuations.

## DIRECT VENT



## OTHER MODELS



<b>NATURAL GAS and PROPANE</b>								
Model	Application	Min. + Max. Input BTUH	Max. Flow Rate at 80°F GPM	Height A in. (cm)	Width B in. (cm)	Depth C in. (cm)	Vent D in. (mm)	Weight lb. (kg)
N-132M	Commercial & Heavy Residential	22,500 to 380,000	7.8	29.5 (75)	19 (48)	12 (30)	5 (127)	105 (47.6)
N-931M	Light Commercial & Heavy Residential	11,000 to 250,000	5.3	24.2 (61.5)	18.3 (46.5)	9.4 (24)	4 (102)	63 (139)
N931DV	Light Commercial & Heavy Residential	11,000 to 250,000	5.3	24.2 (61.5)	18.3 (46.5)	9.4 (24)	4 (102)	63 (139)
N 751M	Medium & Residential	12,000 to 199,000	4.2	23.6 (60)	13.8 (35)	9.4 (24)	4 (102)	47 (21)
N751DV	Medium & Residential	12,000 to 199,000	4.2	24.2 (61)	18.3 (46.5)	9.4 (24)	4 (102)	54 (119)

Specify fuel type, natural gas or propane, when placing an order.

# John Wood® Power Direct Vent

An advanced line of *high efficiency power direct vented water heaters.*

High Quality  
Features:

- Sealed Combustion Chamber Design
- Industry Leading Ultra Quiet Blower
- Exceed Energy Efficiency Standards
- Flexible Venting Configurations

For more information about this product from John Wood®, flip back to pages 12 & 13 in this book or call 1-888-599-2837.

Download from [www.Somanuals.com](http://www.Somanuals.com). All Manuals Search And Download.

# Appendices

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COMMERCIAL GAS CROSS REFERENCE CHART																								
John Wood Signature Model #	Gal. Cap.	MTBU	Old John Wood Model #	Gal. Cap.	MTBU	Rheem Model #	Gal. Cap.	MTBU	New AO Smith Model #	Gal. Cap.	MTBU	Old AO Smith Model #	Gal. Cap.	MTBU	State Model #	Gal. Cap.	MTBU	Bradford White Model #	Gal. Cap.	MTBU	Giant Model #	Gal. Cap.	MTBU	
JW6058	60	58	JW6058	60	58	G60-50	60	50	BT-65	65	50	BT-65	65	50	SBS65-65NE	65	65	50T-65-3N	48	65				
JW3-75-3	75	76	JW752	75	75	G75-75	75	75	BT-80	74	74	BT-80	74	75	SBS75-76NE	74	75	75T-80-2N	75	80				
JW65-95	65	95	JW65-95	65	95	G50-98	50	98	BT-100	100	100	BT-100	100	100	SBS100-76NE	98	75	100T-88-3N	100	88				
JW65-95	65	95				G100-75	100	75	BTV-100	98														
JWSC75-125	75	125	JW65-120	65	120	G75-125	75	125	BTRC-120	71	120	BTR-120	71	120	SBD71-120NE	71	120	D-75T-125-3N	75	125	UG73-125N	73	125	
JW80-160	80	160	JW80-160	80	160	G82-156	82	156	BTRC-154	81	154	BTR-154	81	154	SBD81-154NE	81	154	D-75T-160-3N	75	160	UG73-150N	73	150	
JW80-160	80	160													SBF30-150NE	30	150							
JW80-160	80	160																D-38T-155-3N	38	155				
JWSC80-199	80	199	JW80-199	80	199	G76-180	76	180	BTRC-180	76	180	BTR-180	81	180	SBD81-180NE	81	180	D-80T-180-3N	80	180				
JWSC80-199	80	199				G76-200	76	199	BTRC-199	95	199	BTR-199	81	190	SBD81-190NE	81	190	D-80-199-3N	80	199	UG73-200N	73	200	
JWSC80-199	80	199				G37-200	37	199																
JWSC80-250	80	250				G72-250	72	250	BTRC-251	65	251	BTR-251	65	251	SBD65-251NE	65	251	D-80T-250-3N	80	250				
JWSC100-199	100	199	JW100-199	100	199	G91-200	91	199	BRTC-197	95	199	BTR-197	100	188	SBD100-199NET	100	199	D-100T-199-3N	98	199				
JWSC100-199	100	199				G100-200	100	199	BTRC-199	76	199	BTR-198	100	199	SBD100-199NES	100	199	D-100L-199-3N	100	199				
JWSC80-250	80	250	JW70-250	70	250	G100-250	100	250				BTR-250	100	250	SBD100-250NE	100	250	D-100T-250-3N	98	250	UG65-250N	65	250	
JWSC100-270	100	270				G100-270	100	270				BTR-275	100	275	SBD100-275NE	100	260	D-100L-270-3N	100	270				
JWSC75-300	75	300	JW70-300	70	300	G72-300	72	300	BTR-305	65	305	BTR-305	65	305	SBD65-305NE	65	305	D-75T-300-3N	75	300	UG65-300N	65	300	
JWSC75-300	75	300				G85-300	85	300																

# Appendices

## Cross-Over Matrix

COMMERCIAL GAS CROSS REFERENCE CHART																											
John Wood Signature Model #	Gal. Cap.	MTBU	Old John Wood Signature Model #	Gal. Cap.	MTBU	Rheem Model #	Gal. Cap.	MTBU	New AO Smith Model #	Gal. Cap.	MTBU	Old AO Smith Model #	Gal. Cap.	MTBU	State #	Model #	Gal. Cap.	MTBU	Bradford White Model #	Gal. Cap.	MTBU	Giant Model #	Gal. Cap.	MTBU			
JWSC75-300	75	300		100	310	G100-310																					
JWSC75-360	75	360	JW70-360	70	360	G65-360	65	365	BTR-365	65	365	BTR-365	85	365	SBD85-365NE								UG65-360N	65	370		
JWSC75-399	75	399		65	399	G65-400	65	399																			
JWSC75-399	75	399		85	399	G85-400	85	399	BTR-400	100	399																
JWSC75-399	75	399		100	399	G100-400	100	399																			
JWSC75-505	75	505										BTR-500	85	500	SBD85-500NE										80	505	
AJWSC100-199	100	199		100	199	G100-200A	100	199	BTRC-200A	100	199																
AJWSC80-250	80	250		72	250	G72-250A	72	251	BTRC-251A	65	251	BTR-251A	65	251	SBD65-251NE A											80	250
AJWSC100-270	100	270		100	250	G100-250A	100	250	BTRC-250A	100	250	BTR-250A	100	250	SBD100-250NE A											98	250
AJWSC100-270	100	270		100	270	G100-270A	100	270	BTRC-275A	100	275	BTR-275A	100	270	SBD100-275NE A											100	270
AJWSC75-300	75	300		72	300	G72-300A	72	300	BTRC-305A	65	305	BTR-305A	65	305	SBD65-305NE A											75	300
AJWSC75-300	75	300		85	300	G85-300A	85	300																			
AJWSC75-300	75	300		100	310	G100-310A	100	310																			
AJWSC75-360	75	360		65	360	G65-360A	65	360	BTRC-365A	85	365	BTR-365A	85	365	SBD85-365NE A											65	370
AJWSC75-399	75	399		65	399	G65-400A	65	399																			
AJWSC75-399	75	399		85	399	G85-400A	85	399	BTRC-400A	100	399	BTR-400A	100	399	SBD100-399NE A											80	399
AJWSC75-399	75	399		100	399	G100-400	100	399																			
AJWSC75-505	75	505							BTRC-500A	85	500	BTR-500A	85	500	SBD85-500NE A											80	505

ASME

# Appendices

## Sizing Guide

### Commercial Electric Water Heater Quick Sizing Guide

<b>MOTELS AND HOTELS</b>	
<b># of Units</b>	<b>KW</b>
1-3	27
4-7	54
8-10	2-36
11-17	2-54
18-25	3-54
26-32	4-54
33-40	5-54
41-48	6-54
49-64	8-54
65-80	10-54

<b>COIN OPERATED LAUNDRIES</b>	
<b># of Units</b>	<b>KW</b>
1-3	27
4-7	54
8-10	2-36
11-17	2-54
18-25	3-54
26-32	4-54
33-40	5-54
41-48	6-54
49-64	8-54
65-80	10-54

<b>BEAUTY/BARBER SHOPS</b>	
<b># of Stations</b>	<b>KW</b>
1-3	9
4-9	30
10-15	54
16-21	2-36
22-35	3-54

<b>APARTMENT BUILDINGS</b>	
<b># of Units</b>	<b>KW</b>
1-7	18
8-15	36
16-20	45
21-32	2-36
33-55	3-45
56-70	3-54

Sizing based on 2-3 US gallon/minute shower heads.

# Appendices

## Sizing Guide

### Commercial Gas Water Heater Quick Sizing Guide

#### MOTELS AND HOTELS\*

# of Units	Model
1-3	1-JWSC75-125
4-10	1-JWSC100-199
11-17	2-JWSC80-250
18-25	2-JWSC75-360
26-32	3-JWSC75-300
33-40	3-JWSC75-360
41-46	4-JWSC75-300
47-64	5-JWSC75-399
65-80	6-JWSC75-399

\* Sizing based on 2-3 gallon/minute shower heads and systems with circulation returns.

#### COIN OPERATED LAUNDRIES

# of Units	Model
1-4	1-JW3-75-3
5-7	1-JWSC80-199
8-9	1-JWSC75-250
10-12	1-JWSC75-300
13-16	1-JWSC75-399
17-20	2-JWSC75-250
21-25	2-JWSC75-399

#### BEAUTY/BARBER SHOPS

# of Stations	Model
1-3	1-JW6058
4-9	1-JWSC75-125
10-15	1-JWSC80-250
16-21	1-JWSC75-300
22-35	2-JWSC75-300

#### APARTMENT BUILDINGS\*\*

# of Units	Model
1-7	1-JWSC75-125
8-15	1-JWSC100-199
16-20	1-JWSC75-360
21-32	1-JWSC75-399
33-55	2-JWSC75-360
56-70	2-JWSC75-399

\*\* For larger buildings consult the factory.

## Reference Calculations and Conversions for Electricity

### Ohm's Law

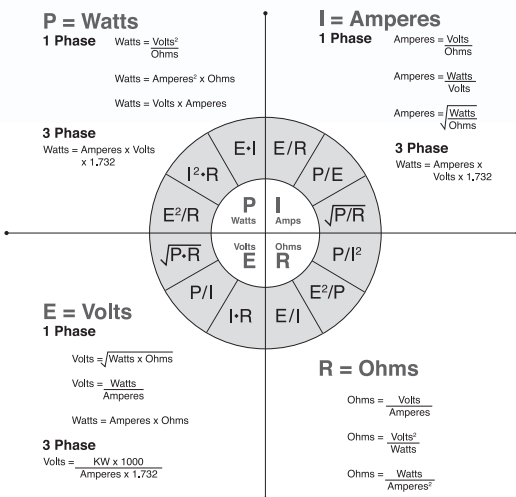
Ohm's Law defines the relationships between (P) power, (E) voltage, (I) current, and (R) resistance. One ohm is the resistance value through which one volt will maintain a current of one ampere.

(I) Current is what flows on a wire or conductor like water flowing down a river. Current flows from points of high voltage to points of low voltage on the surface of a conductor. Current is measured in (A) amperes or amps.

(E) Voltage is the difference in electrical potential between two points in a circuit. It's the push or pressure behind current flow through a circuit, and is measured in (V) volts.

(R) Resistance determines how much current will flow through a component. Resistors are used to control voltage and current levels. A very high resistance allows a small amount of current to flow. A very low resistance allows a large amount of current to flow. Resistance is measured in ohms.

(P) Power is the amount of current times the voltage level at a given point measured in wattage or watts.



# Appendices

## Reference Guide for Water Heating

One US gallon of fresh water weighs 8.333 lb.

Water expands 4.34% heated from 40° to 212°F.

1 BTU = Amount of heat required to raise the temperature of 1 lb. of water 1° F.

$$\text{Recovery GPH (Electric)} = \frac{\text{KW} \times 3412}{8.33 \times \Delta T}$$

$$\text{Recovery GPH (Gas)} = \frac{\text{Input} \times \text{Efficiency}}{8.33 \times \Delta T}$$

$$\text{Req. BTU Input} = \frac{\text{Water Heater Capacity} \times 8.33 \times \Delta T}{\% \text{ Efficiency}}$$

First Hour Draw (FHD)

$$\text{FHD} = (\text{Storage} \times \% \text{ Efficiency}) + \text{Recovery}$$

% of hot and cold water needed to be mixed to obtain a desired temperature

$$\text{Hot water percentage} = \frac{M-C}{H-C}$$

$$\text{Cold water percentage} = \frac{H-M}{H-C}$$

Water C = Cold Water Temperature

H = Hot Water Temperature

M = Mixed Water Temperature

$$\% \text{ Efficiency} = \frac{\text{GPH} \times 8.33 \times \text{Temp. Rise}}{\text{BTU/Hr. Input}}$$

# Appendices

## Reference Guide for Water Heating

$$\text{BTU/Output} = \text{GPH} \times 8.33 \text{ lbs./Gal.} \times \text{Temp. Rise}$$

$$\text{BTU/Input} = \frac{\text{GPH} \times 8.33 \times \text{Temp. Rise}}{\% \text{ Efficiency}}$$

$$\text{KW} = \frac{\text{GPH} \times 8.33 \times \text{Temp. Rise}}{3413}$$

### Temperatures

To convert from degrees Centigrade (C) to degrees Fahrenheit (F) multiply the number of degrees C by 9/5 (or 1.8) and add 32.

To convert from degrees Fahrenheit (F) to degrees Centigrade (C) first subtract 32 from the number of degrees F then multiply the remainder by 5/9 (or 0.556).

### Gas/Oil

Gas		BTUs
1 lb. of Butane	=	21,300
1 Gal. of Butane	=	102,600
1 Cu. Ft. of Butane	=	3,260
1 Cu. Ft. of Manufactured	=	530
1 Cu. Ft. of Mixed	=	850
1 Cu. Ft. of Natural	=	1,075
1 lb. of Propane	=	21,600
1 Gal. of Propane	=	91,700
1 Cu. Ft. of Propane	=	2,570

# Appendices

## Reference Guide for Water Heating

### Oil vs. Electric vs. Propane vs. Natural Gas

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<b>Oil</b>	1 litre = 36,515 BTUs* Example Price = 60.0¢/litre
<b>Electric</b>	1 Kilowatt Hour = 3,413 BTUs* Example Price = 10.1¢/KW (kilowatt)
<b>Propane</b>	1 litre = 24,197 BTUs* Example Price = 63.0¢/litre
<b>Natural Gas</b>	1 M <sup>3</sup> 35,310 BTUs* Example Price = 44.0¢/M <sup>3</sup> (cubic metre)**

**Formula**      
$$\frac{\text{BTUs per Unit} \times \text{Efficiency}}{\text{Cost per Unit}}$$

*Example:*      Propane =  $\frac{24,197}{0.63} \times 92\% = 35335$  BTUs per \$1.00

GST is extra on all prices.

\* Information supplied by The Ontario Ministry of Energy.

\*\* This price reflects delivery charge and monthly administration charge to service your account.

### Formulas and Facts

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- 1 gallon of water weighs 8.33 lbs.
- 1 gallon of water has a volume of 231 cubic inches
- 1 cubic foot of water weighs 62.38 lbs. and contains 7.48 gallons of water
- 100 feet of 3/4" copper pipe contains 2.5 gallons of water; 1" pipe contains 4.3 gallons
- 8.33 BTU will raise 1 gallon of water 1°F at 100% efficiency (electricity)



## Reference Guide for Water Heating

- 11 BTUs are required to raise 1 gallon of water 1°F at 70% efficiency (gas)
- 3,412 BTUs equal 1 kilowatt hour (KW)
- 1 KW will raise 410 gallons of water 1°F at 100% efficiency
- 1 BTU x 0.293 = watts
- 1 KW = 1000 watts
- 2.42 watts are required to raise 1 gallon of water 1°F
  - 1 KW will raise 10.25 gallons of water 40°F at 100% efficiency
  - 1 KW will raise 6.8 gallons of water 60°F at 100% efficiency
  - 1 KW will raise 5.1 gallons of water 80°F at 100% efficiency
  - 1 KW will raise 4.1 gallons of water 100°F at 100% efficiency

### Formula for mixing hot water

$$\frac{M-C}{H-C} = \text{Percent of hot water required to produce desired mixed temperature}$$

Where M = mixed water temperature; C = cold water temperature;  
H = hot water temperature

*For example: How much of a shower is hot water and how much is cold water?*

My shower temperature is 105°F, my water heater thermostat is set on 120°F and the cold water inlet temperature is 50°F.

$$\frac{105 - 50 = 55}{120 - 50 = 70} = 79\% \text{ of the shower is } 120^\circ \text{ hot water}$$

This formula for mixing hot water is important when explaining a NOT ENOUGH HOT WATER trouble call and the water heater is functioning properly.

# Appendices

## Reference Guide for Water Heating

ELECTRIC	GAS
<b>Energy Costs:</b>	<b>Energy Costs:</b>
KW x fuel costs = energy costs	Cubic feet x fuel costs = energy costs
100 x 0.05 = \$5.00	100 x 0.75 = \$7.50
<b>To obtain gallons per hour (GPH) recovery</b> $\frac{\text{WATTS}}{2.42 \times (\text{temp rise } ^\circ\text{F})}$	<b>To obtain gallons per hour (GPH) recovery</b> $\frac{\text{HOURLY INPUT (BTUs)}}{11.0 \times (\text{temp rise } ^\circ\text{F})}$
I have a 30-gallon electric heater, non-simultaneous operation, 4,500 watt elements. What is the recovery GPH if my cold water is 40°F and my thermostat is set to 120°F? $\frac{4,500}{2.42 \times 80} = 23 \text{ gallons per hour}$	I have a 30-gallon gas heater, rated at 40,000 BTUs. What is the recovery GPH if my cold water is 40°F and my thermostat is set to 120°F? $\frac{40,000}{11.0 \times 80} = 45 \text{ gallons per hour}$
<b>Temperature Rise (°F)</b> $\frac{\text{WATTS}}{2.42 \times \text{GPH}}$	<b>Temperature Rise (°F)</b> $\frac{\text{HOURLY INPUT (BTUs)}}{11.0 \times \text{GPH}}$
I have a 30-gallon electric heater, non-simultaneous operation, 4,500 watt elements. What is the maximum temperature rise if the heater can recover 23 gallons per hour? $\frac{4,500}{2.42 \times 23 \text{ rise}} = 80^\circ \text{ temp}$	I have a 30-gallon gas heater, rated at 40,000 BTUs. What is the maximum temperature rise if the heater can recover 45 gallons per hour? $\frac{40,000}{11.0 \times 45 \text{ rise}} = 80^\circ \text{ temp}$

# Appendices

## Reference Guide for Water Heating

<b>Oil</b>		<b>BTUs</b>
1 Gal. #1 Fuel	=	136,000
1 Gal. #2 Fuel	=	138,500
1 Gal. #3 Fuel	=	141,000
1 Gal. #5 Fuel	=	148,500
1 Gal. #6 Fuel	=	152,000

1 lb. of Gas = 28" Water Column

1 lb. of Gas = 16 oz.

100 Cu. Ft. = 1 therm.

## Conversions

<b>Multiply</b>	<b>By</b>	<b>To Obtain</b>
BTU/HR	0.293	W
Ft.	0.3048	m
Ft./min., fpm	0.00508	m/s
Ft. <sup>2</sup>	0.0929	m <sup>2</sup>
Ft. <sup>3</sup>	0.0283	m <sup>3</sup>
Gallon (U.S. 231 in <sup>3</sup> )	3.79	L
Gallon	0.00379	m <sup>3</sup>
Horsepower (boiler)	9.81	KW
Inch	25.4	mm
Mile	1.61	km
Pound lb. (mass)	0.454	kg
Psi	6.89	kPa

# Appendices

## Innovative Designs, Built-to-Last

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John Wood® Water Heaters are designed and built with innovative features to ensure maximum quality, safety and reliability. Our heaters are thoroughly factory tested, field-proven and meet or exceed industry standards.

### TankSaver®

The exclusive and patented TankSaver® design prolongs tank life. TankSaver® impedes corrosion by guarding metal tank openings from exposure and keeping them watertight. The durable construction virtually eliminates rust.

### American Society of Mechanical Engineers (ASME)

In June 2004, GSW Water Heating, Ferguson plant became authorized by ASME to build tanks in accordance with the ASME Boiler and Pressure Vessel Code.

### ASHRAE Efficiency Standard 90.1 1999

GSW Signature series commercial water heaters meet the ASHRAE Efficiency Standard 90.1 1999. The burner efficiency of these units is over 80%.

### Certified Hydrostatic Tests

Design test pressure - 300 psi. Maximum working pressure - 150 psi.

### NRCAN Standard

All GSW/John Wood® residential water heaters meet or exceed NRCAN energy efficiency standards.

## Coast-to-Coast Service & Support

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In order to bring you unsurpassed quality and reliability after you've purchased a GSW John Wood® product, we've created a number of service and support resources to help take you through installation and beyond. Operating hours are 8:00 a.m. to 6:00 p.m. EST for our Technical Support call centre (1-888-479-8324), which is staffed by technical experts who provide in-depth product support and troubleshooting advice. We offer a wide range of hands-on training programs from basic refresher courses to product-specific programs. Our spare parts inventory carries a comprehensive supply of GSW parts to help make repairs fast and easy.

# Warranty

1. Warranty terms are set out on the warranty certificate enclosed with each unit. 2. Warranty replacements are issued only in the case where a John Wood® heater is used to replace an approved John Wood® warranty claim. 3. Extended warranty sticker programs are available.

Type	Inner Tank	Parts
Residential Water Heaters	6 years	1 year
SpaceSaver® Models (except SS025 – 5 year)	6 years	1 year
PRO Models	8 years	2 years
Indirects	5 years	1 year
Storage Boosters	5 years	1 year
Residential Oil Fired*	6 years	1 year (excludes burner)
Commercial Water Heaters	3 years	1 year
Insulated Commercial Storage Tanks	5 years	1 year
Range Boilers	1 year	N/A
Bare Commercial Storage Tanks	1 year	N/A
Commercial Polaris®	3 years	1 year
Residential Polaris®	10 years	1 year
Tankless Residential	10 years	3 years
Tankless Commercial	3 years	3 years
Diaphragm Pump Tanks	5 years	N/A
Potable Expansion Tanks	5 years	N/A
Hydronic Expansion Tanks	5 years	N/A

\* Oil burners are guaranteed by burner manufacturer.

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